UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,182	02/12/2002	Larry Fabiny	019930-001010US	1189

20350 7590 09/09/2005

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
SINGH, DALZID E	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,182	FABINY, LARRY	
	Examiner	Art Unit	
	Dalzid Singh	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *1-26,31,32,38 and 39* is/are allowed.

6)☒ Claim(s) *27-29 and 33-36* is/are rejected.

7)☒ Claim(s) *30 and 37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 36 is rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al (US Patent No. 6,563,977).

Regarding claim 36, Chen et al show a wavelength router for receiving, at an input port, a beam having a plurality of spectral bands and directing subsets of the spectral bands to respective ones of a plurality of output ports, as shown in Fig. 4, the wavelength router comprising:

means for collimating the beam (50);

means for dispersing the collimated beam into a plurality of angularly separated beams corresponding to the spectral bands (gratings (40) disperse the beam);

means for 90 degree rotation of polarization components of the angularly separated beams (polarization rotator rotates the beam 90 degrees; see col. 13, lines 1-4); and

means for routing the angularly separated beams to the output ports (lens (48) routes the beam to the output ports).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 27-29 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (US Patent No. 6,563,977) in view of Flanders (US Patent No. 6,362,919).

Regarding claim 27, Chen et al disclose method for directing a light beam having a plurality of spectral bands received at an input port, as shown in Fig. 1, the method comprising:

collimating the light beam (lens (10) collimates the light beam);

dispersing the collimated light beam into a plurality of angularly separated beams corresponding to the spectral bands (gratings (16) disperse the collimated light beam);

propagating the angularly separated beams through a polarization rotator (14);

focusing the angularly separated beams (lens (10) focus the light beam); and

routing the angularly separated beams to respective ones of a plurality of output ports (the light beam is routed to the output ports, shown by arrows coming out of port (6)).

Chen et al disclose polarization rotator as discussed above and differ from the claimed invention in that Chen et al do not specifically disclose that the polarization rotator is a half-wave plate. However providing half-wave plate as polarization rotator is well known. Flanders is cited to show such well known concept. In col. 2, lines 25-30, Flanders teaches the use of half-wave polarization rotator. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to replace the polarization rotator of Chen et al with that of Flanders. One of ordinary skill in the art would have been motivated to do such in order to provide fixed polarization orientation without the need of adjustment.

Regarding claim 28, as shown in Fig. 1, Chen et al show routing the angularly separated beams to respective ones of the plurality of output ports comprises retroreflecting the angularly separated beams by reflecting each such angularly separated beam an even number of times (in Fig. 1, Chen et al show mirror which retroreflects the beams, therefore, it would have been obvious that such reflection can be formed multiple number of times).

Regarding claim 29, as discussed above, Chen et al disclose that routing the angularly separated beams to respective ones of the plurality of output ports further comprises again propagating the angularly separated beams through the half-wave plate.

Regarding claim 33, Chen et al disclose method for directing a light beam having a plurality of spectral bands received at an input port, as shown in Fig. 1, the method comprising:

collimating the light beam (lens (10) collimates the light beam);

dispersing the collimated light beam into a plurality of angularly separated beams corresponding to the spectral bands (gratings (16) disperse the collimated light beam);

propagating the angularly separated beams through a polarization rotator (the light beam is routed to the output ports, shown by arrows coming out of port (6));

focusing the angularly separated beams (lens (10) focus the light beam); and

retroreflecting the angularly separated beams by reflecting each such angularly separated beam an odd number of times greater than two (in Fig. 1, Chen et al show mirror which retroreflects the beams, therefore, it would have been obvious that such reflection can be formed multiple number of times such as odd number of time grater than two).

Chen et al disclose polarization rotator as discussed above and differ from the claimed invention in that Chen et al do not specifically disclose that the polarization rotator is a quarter-wave plate. However providing quarter-wave plate as polarization rotator is well known. Carlson is cited to show such well known concept. In col. 9, lines 55-60, Carlson teaches the use of quarter-wave polarization rotator. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to replace the polarization rotator of Chen et al with that of Carlson. One of ordinary skill in the art would have been motivated to do such in order to provide fixed polarization orientation without the need of adjustment.

Regarding claim 34, as discussed above, Chen et al disclose reflection of the beam, as shown in Fig. 1 of Chen et al, the mirror reflects the beams, therefore, it would

have been obvious that such reflection can be formed multiple number of times such as three times.

Regarding claim 35, as discussed above, the combination of Chen et al and Carlson shows routing the angularly separated beams to respective ones of the plurality of output ports further comprises again propagating the angularly separated beams through the quarter-wave plate.

Allowable Subject Matter

5. Claims 1-26, 31, 32, 38 and 39 are allowed.

6. Claims 30 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 27-29, 33-35 and 36 have been considered but are moot in view of the new ground(s) of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
September 2, 2005
Dabrid Singh